IEC 62056 DLMS/COSEM workshop
Part 1: the DLMS UA

Metering Asia, Kuala Lumpur

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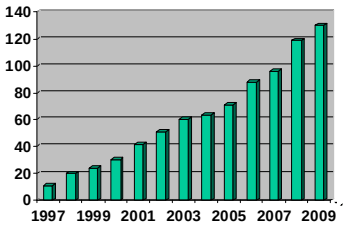
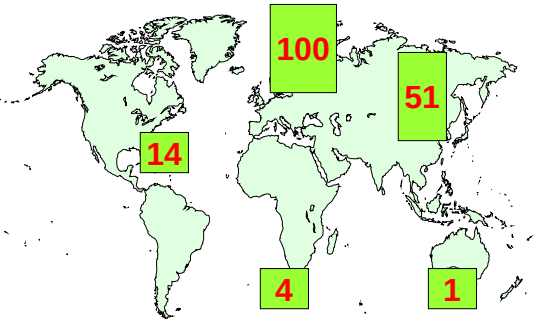
DLMS UA Mission, objectives, services

- Mission:
  To develop open standards for meter data exchange, ensuring interoperability, in order to optimize business processes, increase efficiency and secure investment
- Objectives
  - pre-standardization for meter data exchange, market relevance
  - identify possible applications
  - lobby with potential users
  - provide networking opportunities for experts, share best practices
  - represent members in international standard organizations
- Services
  - specification maintainance and development
  - registration authority for IEC 62056
  - technical support and training
  - operate conformance certification scheme

DLMS UA factsheet





- Formed in 1997
- 171 members (May 2010)
- 5 continents - 40 countries
- from all branches of the industry
- 140 Product Certificates

DLMS UA membership

Regular members
- Joining fee: € 1,000
- Annual fee: € 1,000
- Mgmt. Commitee: 7 seats
- Voting rights

Associated members:
- Organizations with mutual interest

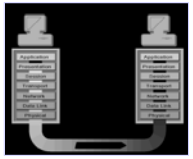
Benefits:
- Access to the specification „Coloured books”
- Access to conformance test tool and certification (Regulars)
- Participation in the management and technical work
- Technical support

DLMS UA Milestones

- 1997: DLMS UA established
- 1999: First implementations hit the market
- 2002:
  - International standards published: IEC & CEN
  - Conformance testing in place
  - Training seminars launched
- 2003 - 2005: Global spread
  - Solidly established in the C & I sector
- 2006 - 2010:
  - Second edition of IEC 62056
  - Strong growth from Asia
  - Specification enhanced for smart metering and gas metering
  - Core standard

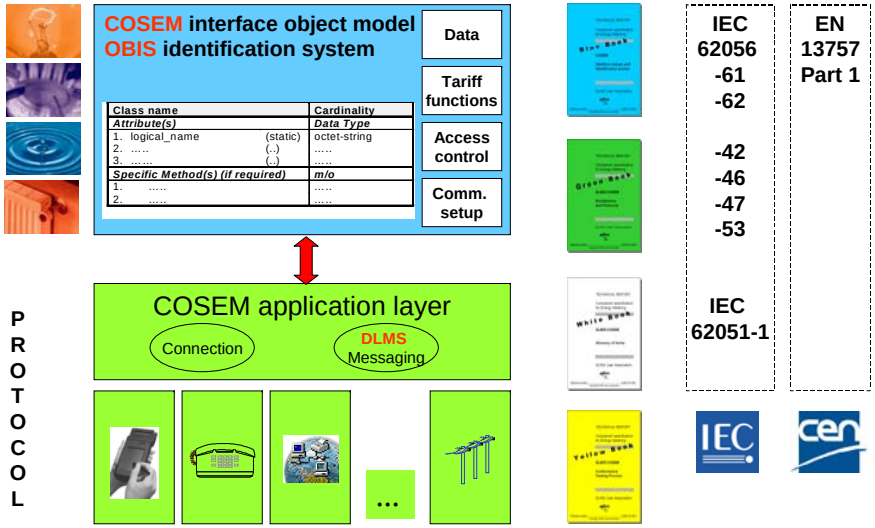
DLMS UA Working groups

- WG Maintenance and development
  - registration of standard elements
  - development of new elements
  - development and validation of the CTT
  - Project Teams PLC and Gas



- WG Final End users and Developers: new, led by EDF
  - use cases
  - feedback from the field and development
  - interoperability testing

The DLMS/COSEM standards



The „Coloured books"

Specifies the **DATA MODEL** comprising the COSEM interface classes and OBIS codes for the various energy types. Internationally standardized by the IEC and CEN.

Specifies the **PROTOCOLS** with DLMS on top, for the various media-specific communication profiles, based on widely used ISO/IEC, Internet, NIST and FIPS standards. Internationally standardized by the IEC and CEN.

Specifies **CONFORMANCE TEST** plans for the COSEM object model and the communication layers, and describes the testing and certification process.

GLOSSARY OF TERMS helps to understand the specification. Internationally standardized by the IEC.

Electricity metering standards

International Electrotechnical Commission

TC 13 - Electrical energy measurement and load control
WG 14 - Data exchange for meter reading, tariff and load control

- IEC 62051-12004: *Terms related to data exchange using DLMS/COSEM*
- IEC 62056-21:2002, *Direct Local Data Exchange (3rd ed. of IEC 61107)*
- IEC 62056-42:2002, *Physical layer services and procedures for connection oriented asynchronous data exchange*
- IEC 62056-46:2007, *Data Link Layer using HDLC protocol*
- IEC 62056-53:2006, *COSEM Application Layer*
- IEC 62056-61:2006, *OBIS Object Identification System*
- IEC 62056-62:2006, *Interface Objects*
- IEC 61334-6:2000, *A-XDR encoding rules*

Water, gas, heat metering standards

European Committee for Standardization

TC 294 - Communication systems for and remote reading of meters
WG 2 - Application Layer

EN 13757-1: Communication system for and remote reading of meters - Part 1: Data exchange

- General description - Network Architecture
- Data exchange using local connections (from IEC TC 13)
- Data exchange using local area network (M-Bus, Euridis from TC 13)
- Data exchange using wide area network (from IEC TC 13)
- Data exchange using radio communication (TC 294 WG 5)
- Object Identification System for HCA, cooling, heat, gas, water

DLMS UA in international standardization